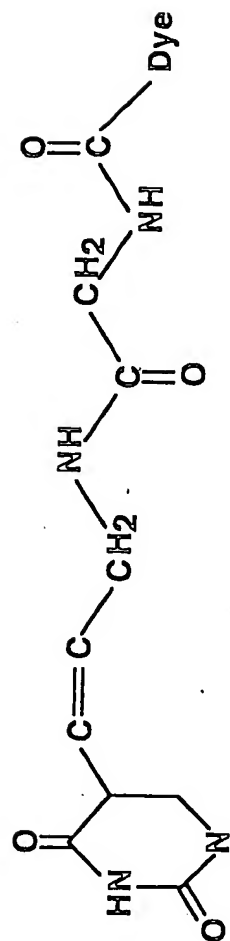


Diglycinylnyl linker



Tetraglycinylnyl linker

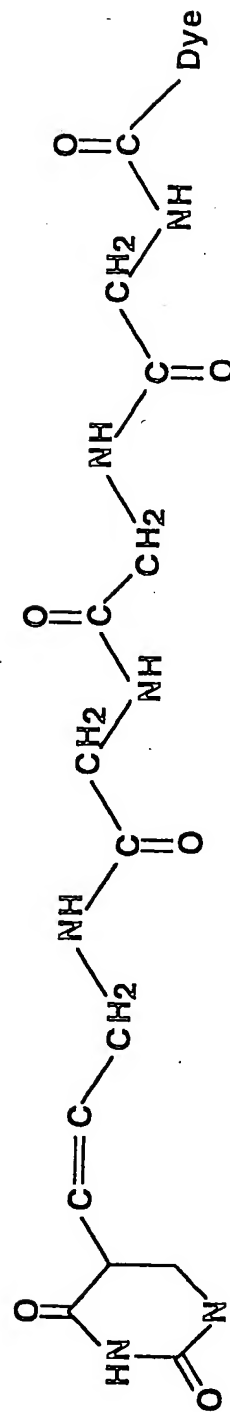
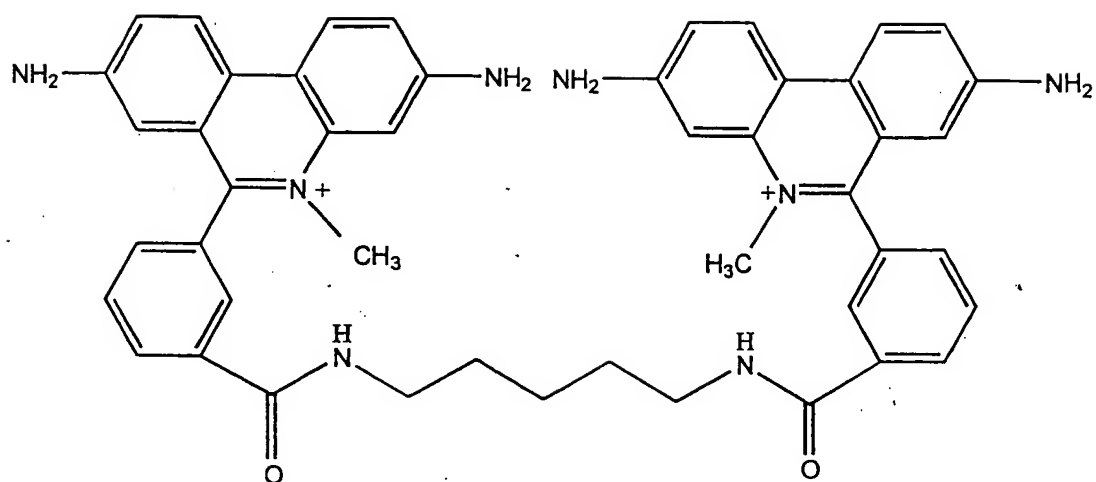
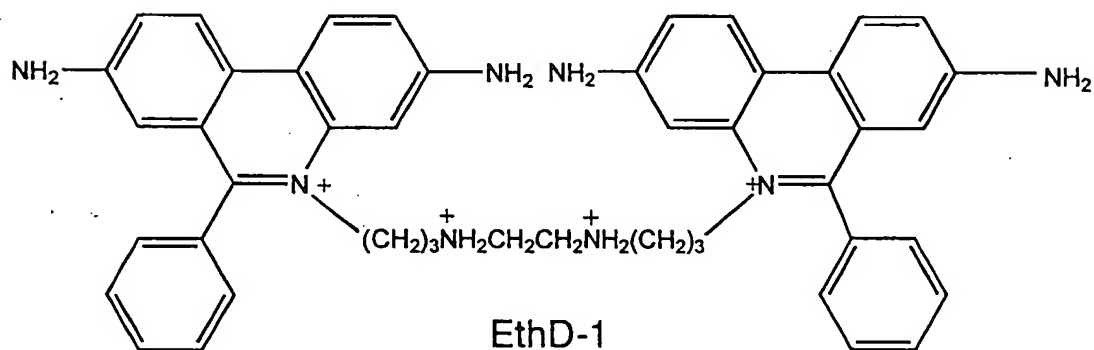


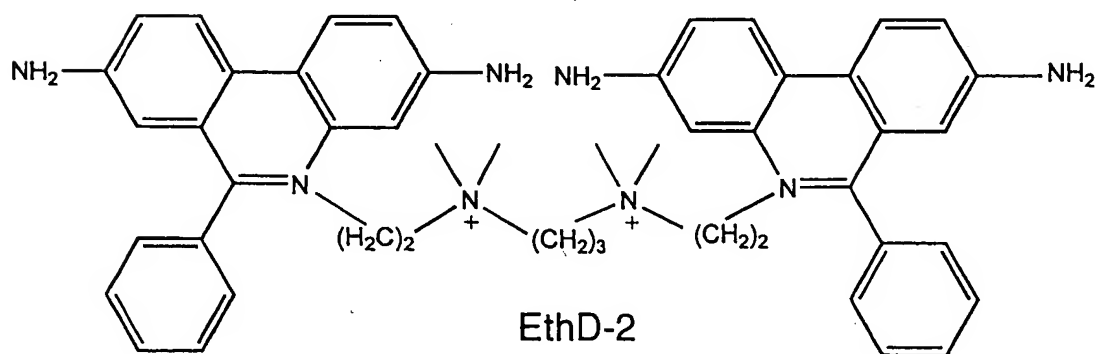
Figure 1



*meta*-EthD

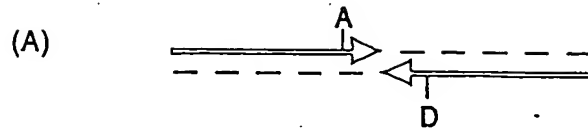


EthD-1



EthD-2

Figure 2



A = Energy Acceptor

D = Energy Donor

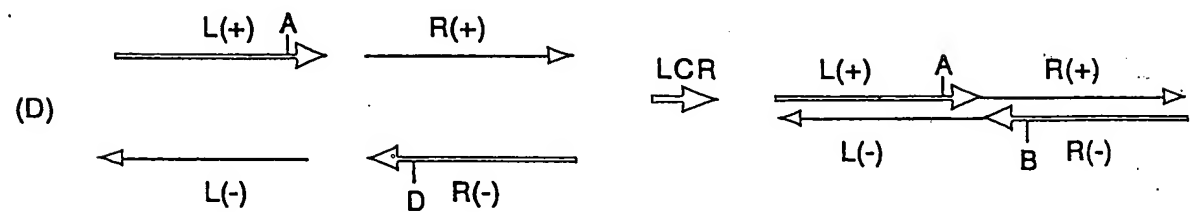
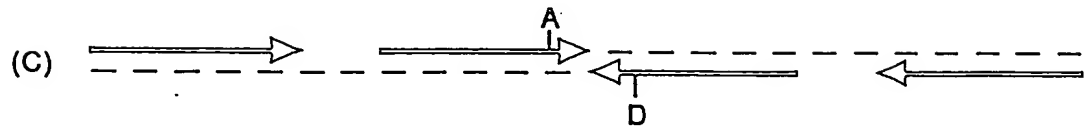
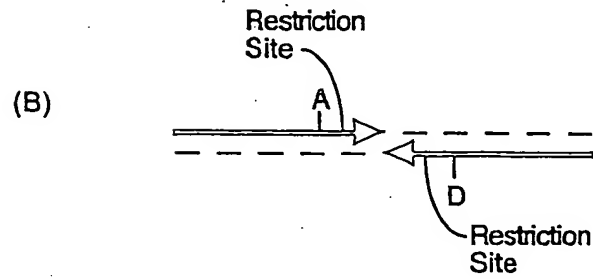


Figure 3

Target Sequence

——GCGACCTGCGAATGCTATGGATCAGGCTAGCCA——  
——CGCTGGACGCTTACGATACCTAGTCCGATCGGT——

(A)

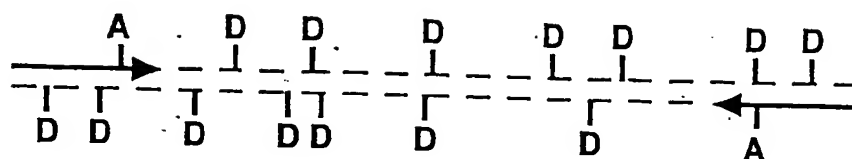
Donor  
↓  
GCGACCTGCGAATGCTATggatcaggctagcca  
cgctggacgcttacgataCCTAGTCCGATCGGT  
←  
Acceptor

(B)

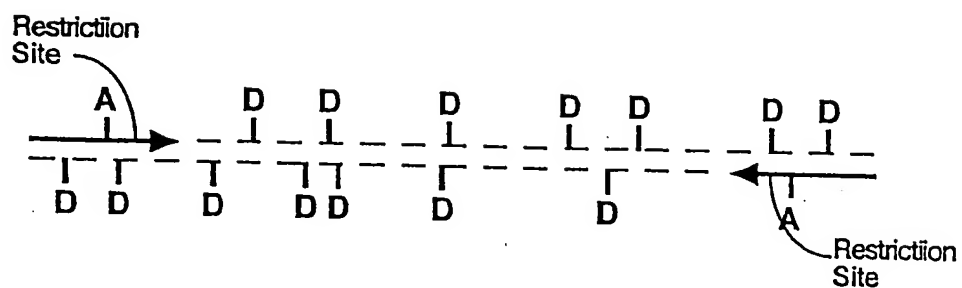
Donor  
↓  
GCGACCTGCGAATGCTATggatcaggctagcca  
cgctggacgcttacgatacctAGTCCGATCGGT  
←  
Acceptor

Figure 4

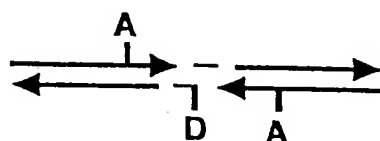
(A) PCR



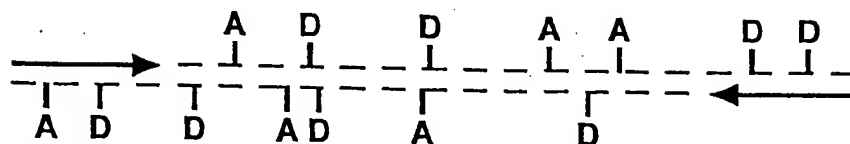
(B) SDA



(C) GAP-LCR



(D) PCR

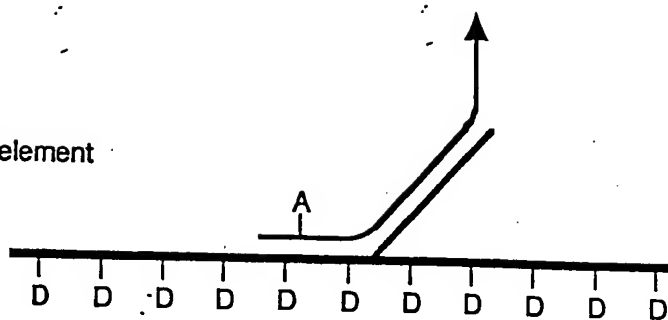


A = Energy Acceptor

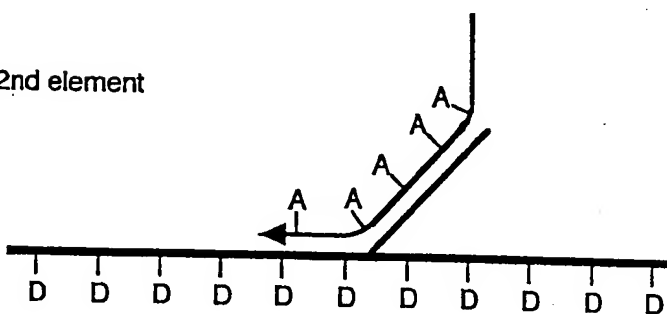
D = Energy Donor

Figure 5

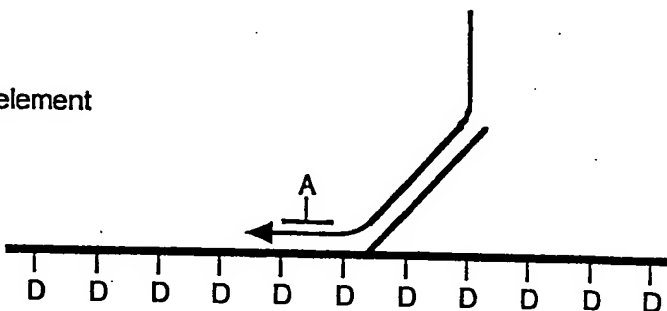
(A) Primer with 2nd element



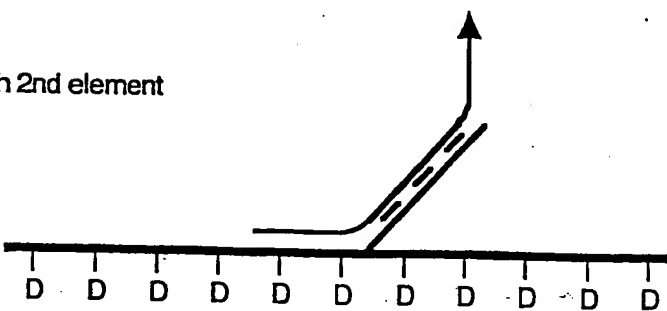
(B) Nucleotide with 2nd element



(B) Probe with 2nd element



(B) Intercalators with 2nd element



D = Energy Donor  
A = Energy Acceptor

Figure 6

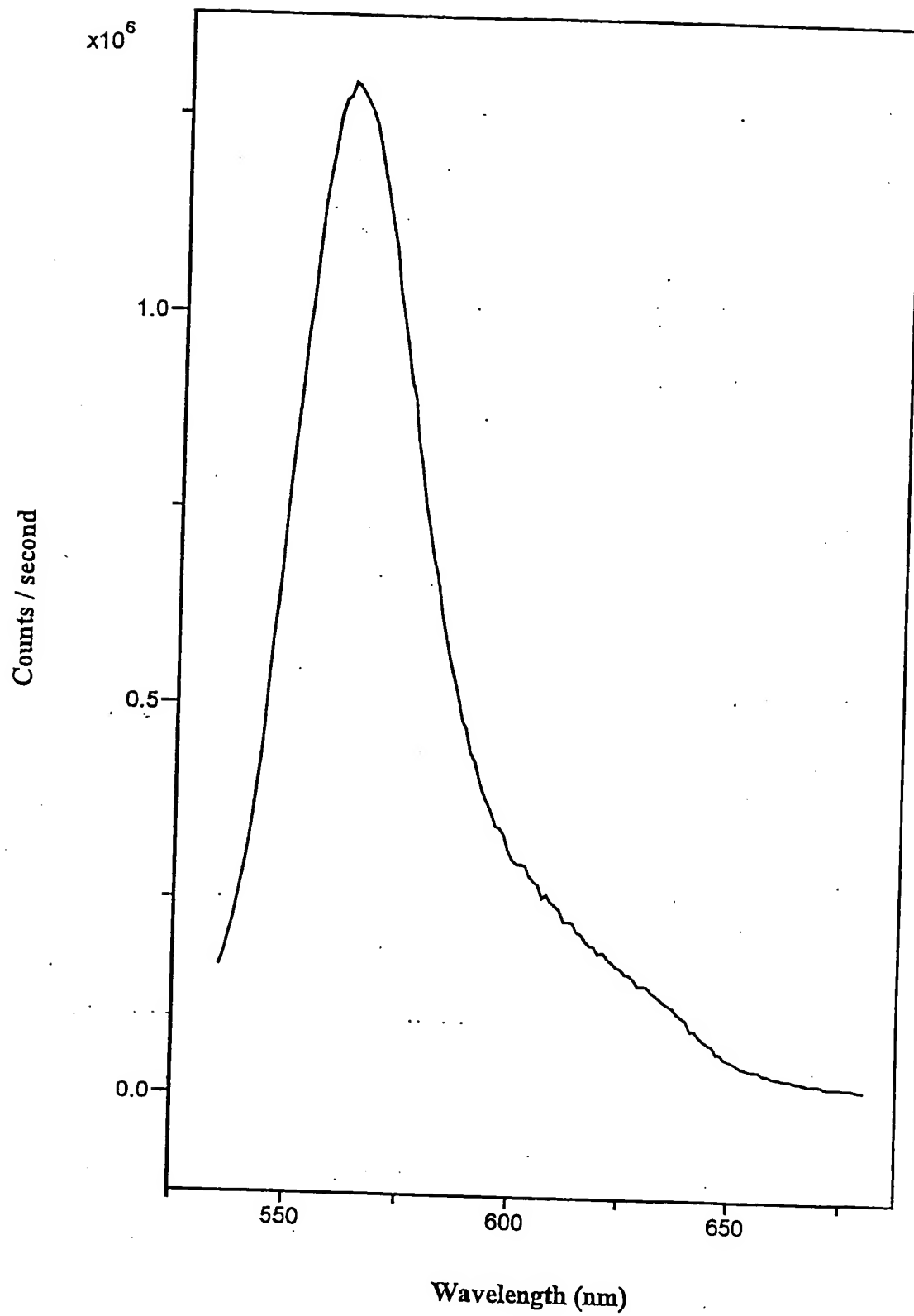


Figure 7

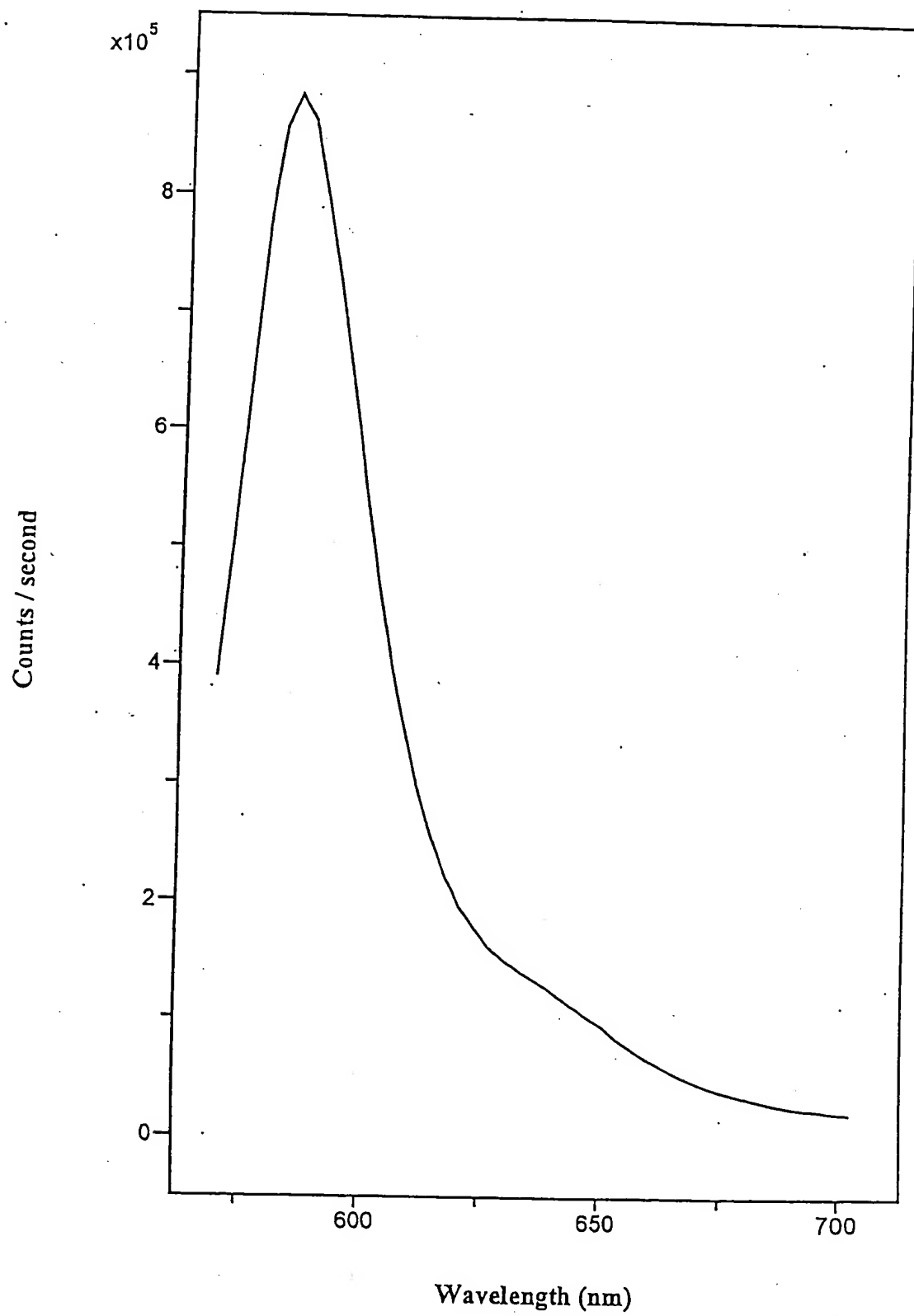


Figure 8



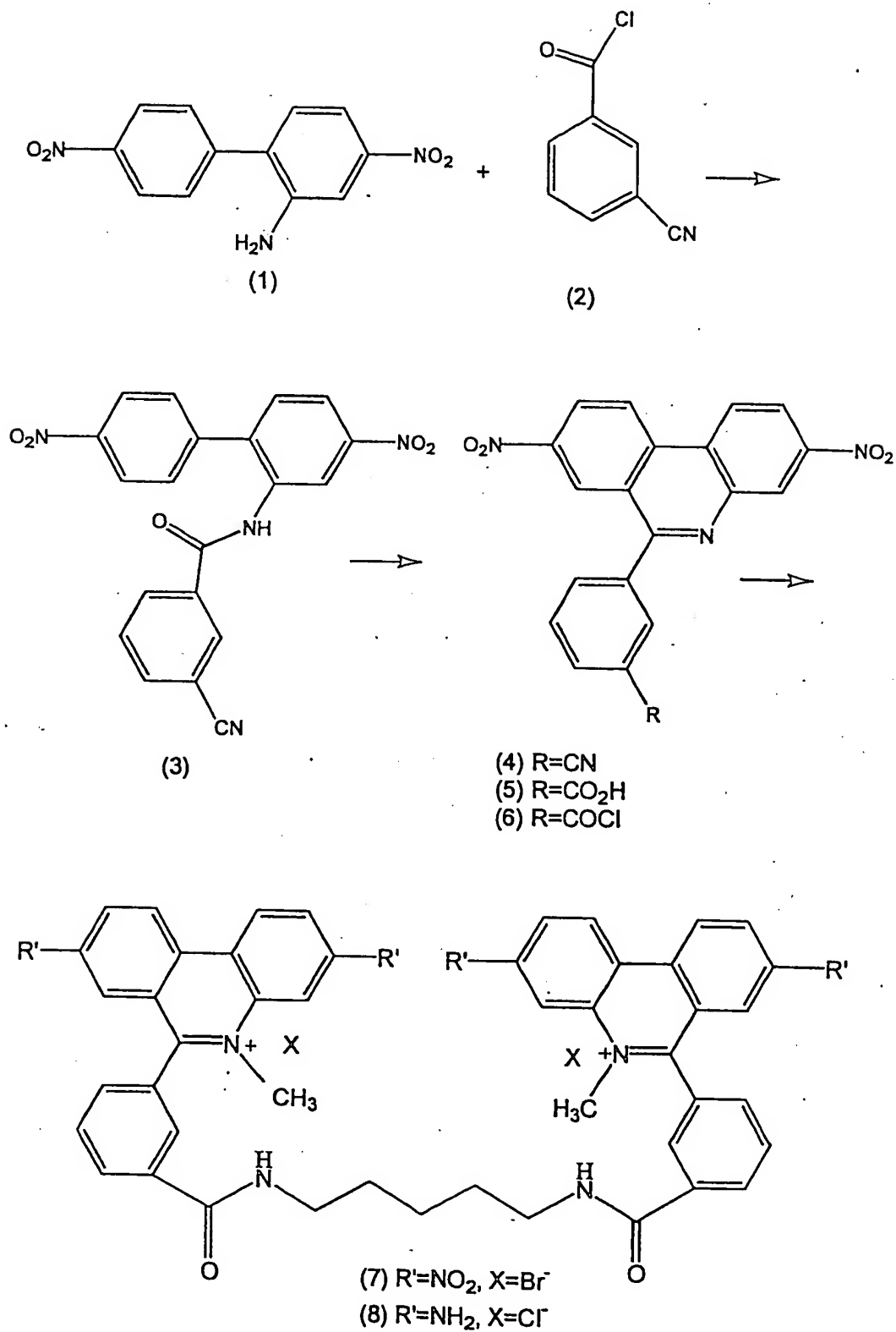
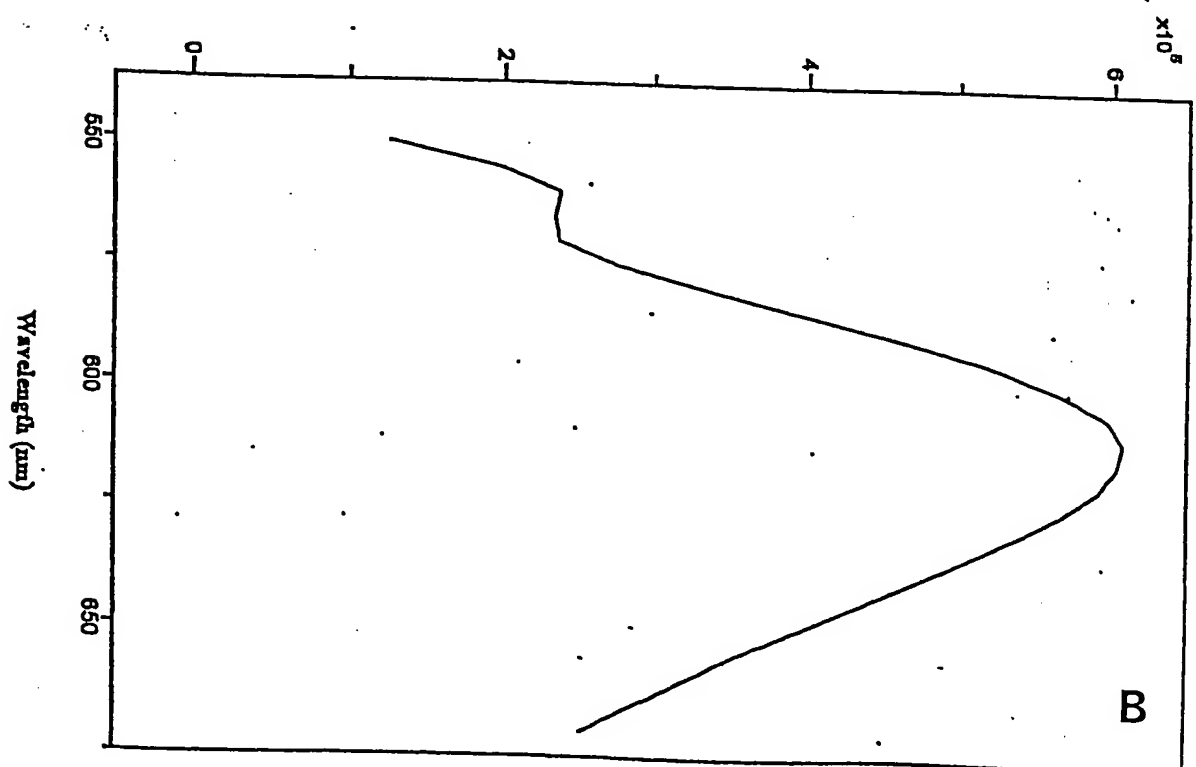
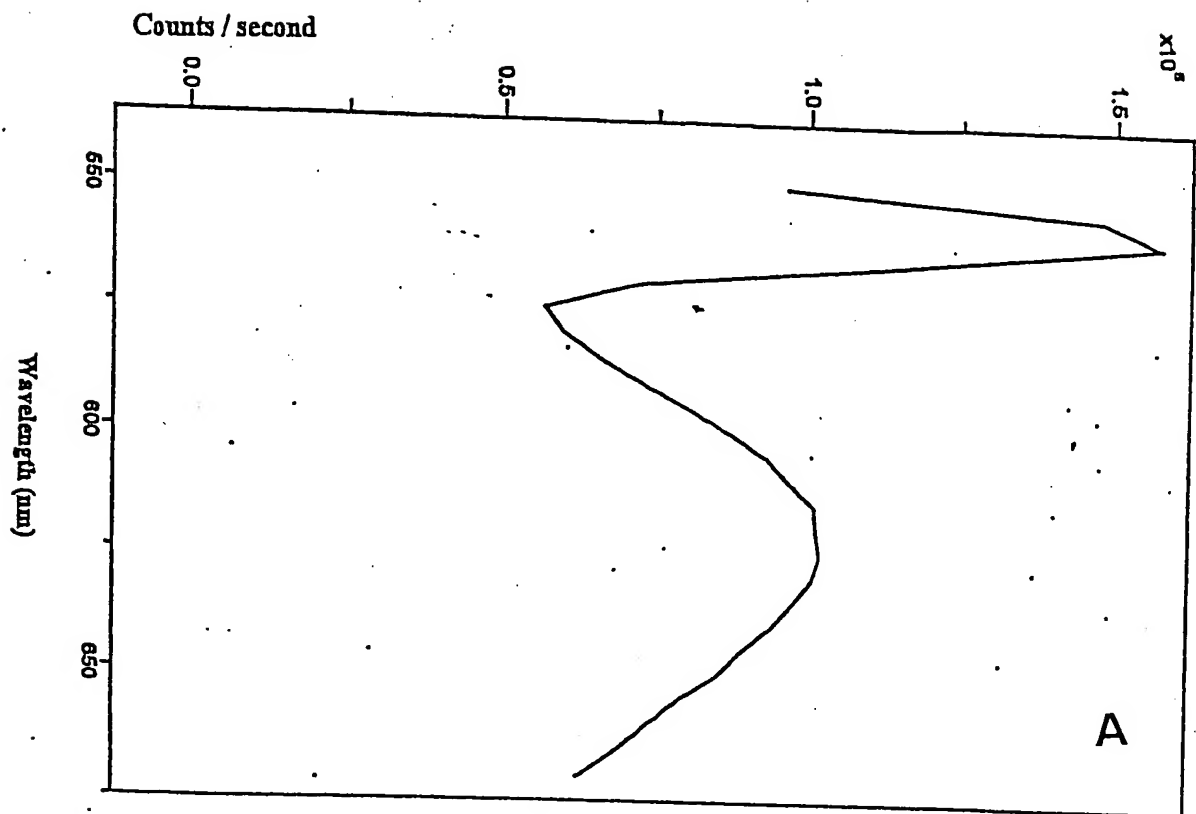
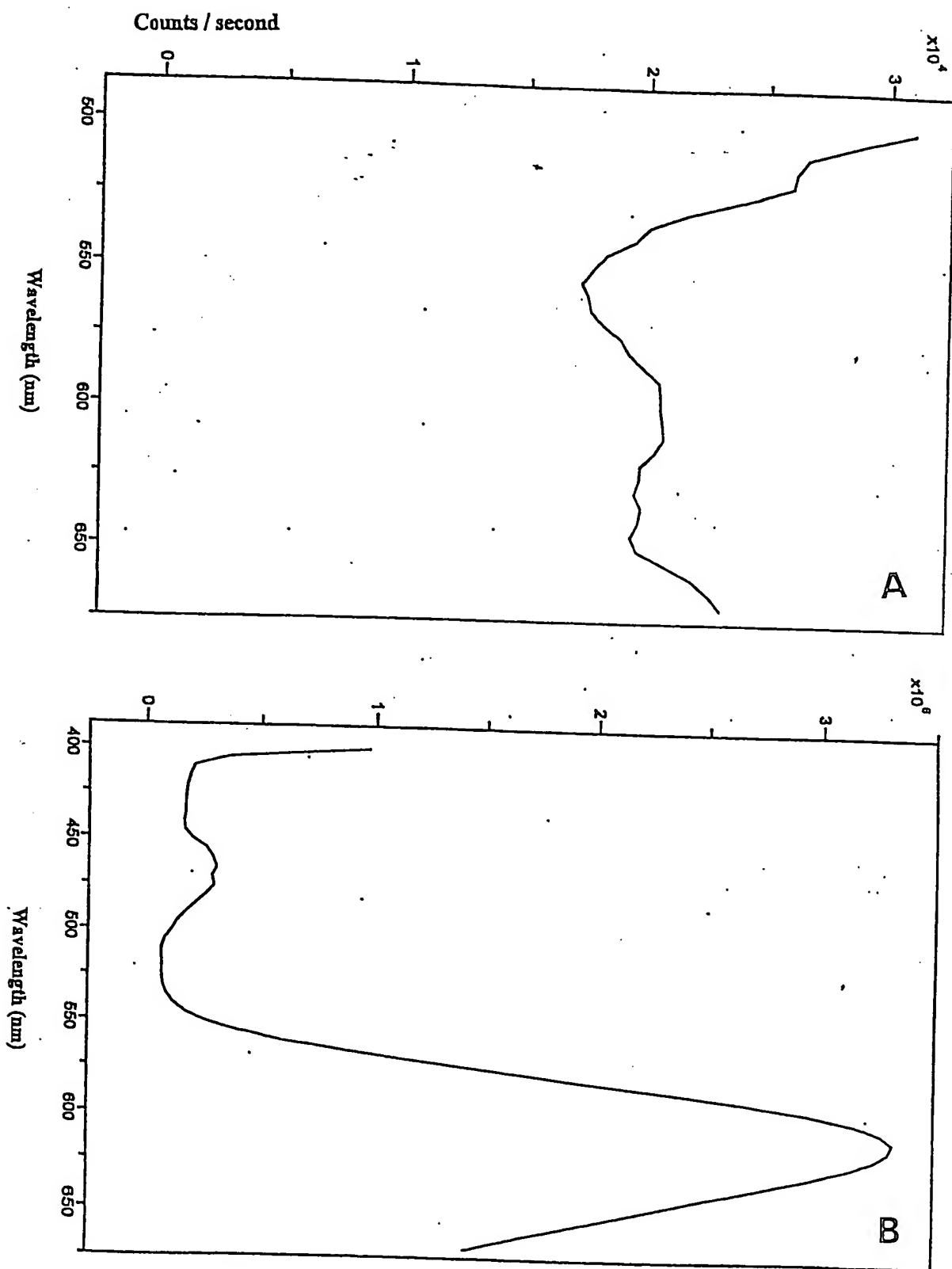


Figure 9



Illumination at 472 nM  
Figure 10



Illumination at 350 nm

Figure 11

# HIV Anti-sense Amplicon

Forward Primer

catgatccgg atgggagggtg →

Hybridization Probe

taatgggtg agtatcccctg cctaactct →

catgatccgg atgggagggtg ggtctgaaac gataatgggtg agtatcccctg cctaactcta ttcaactatcc ggatgtgc  
gtactaggcc taccctccac ccagactttg ctattaccac tcataggac ggattgagat aagtgatagg cctacacg

← agat aagtgatagg cctacacg

Reverse Primer


Figure 12



U = Uridine (ribonucleotide)

T = Thymidine (deoxyribonucleotide)

Q = Inosine (ribonucleotide)



Reverse Transcriptase



## Figure 13

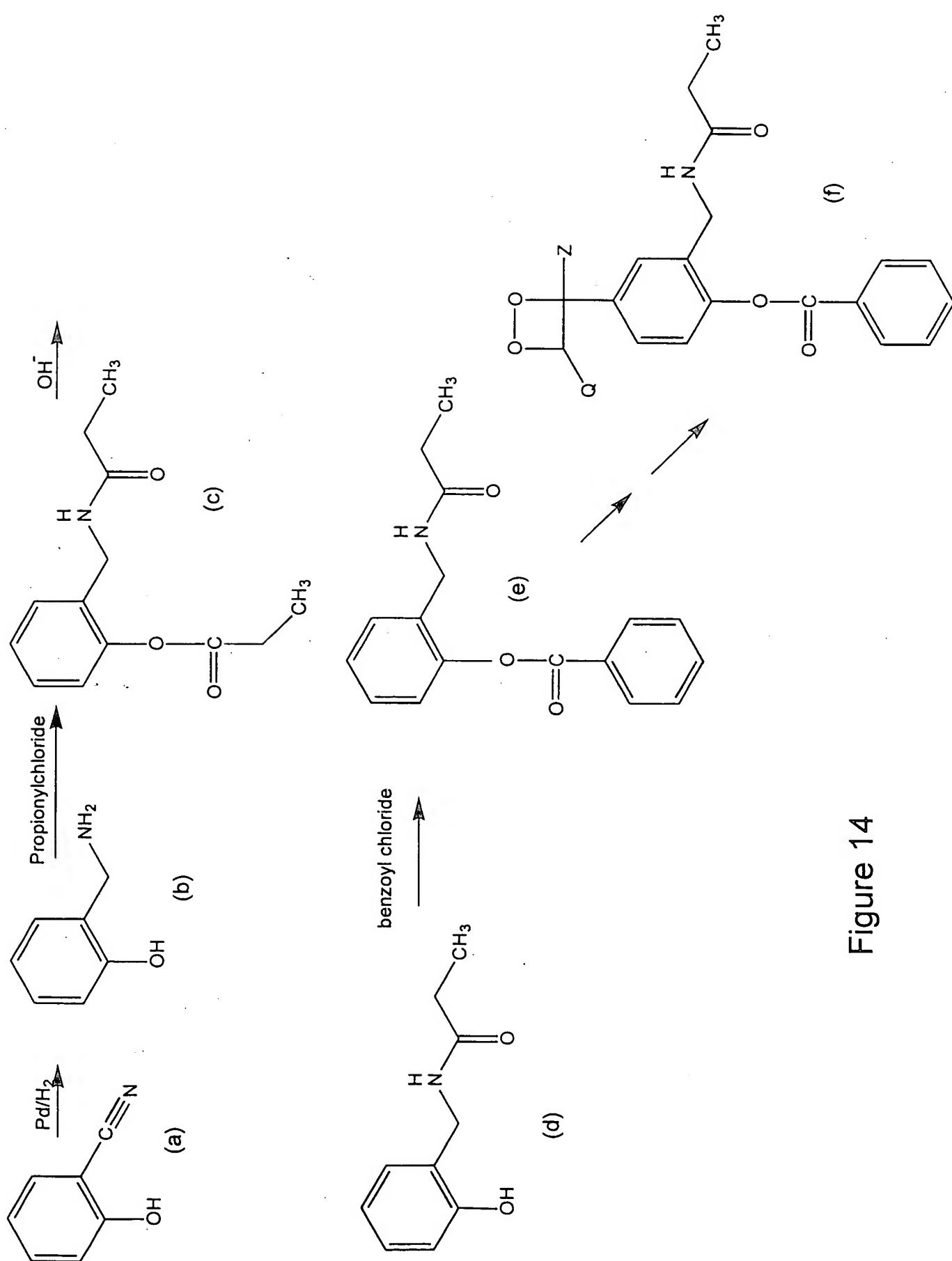


Figure 14

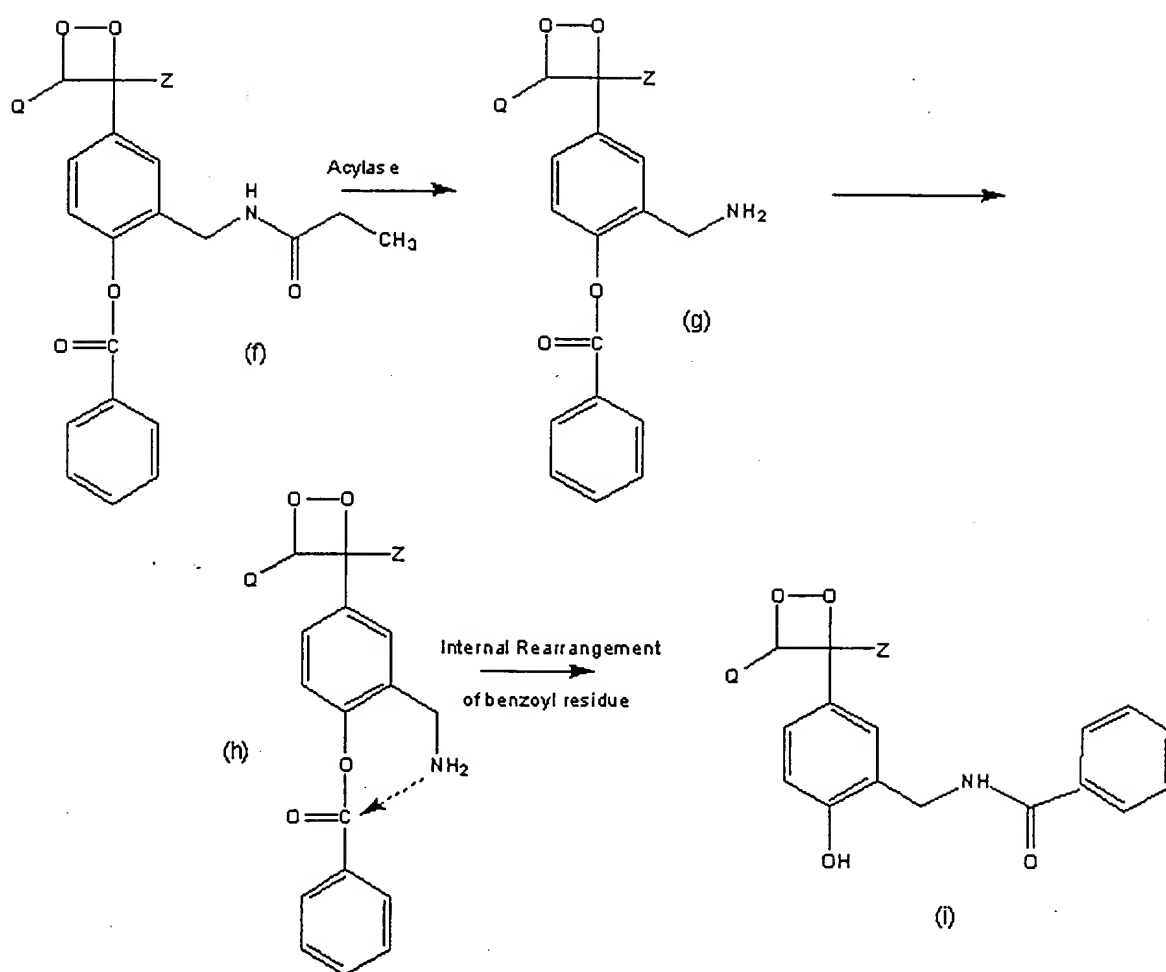


Figure 15